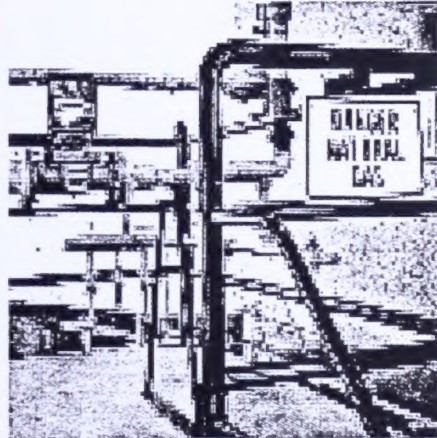
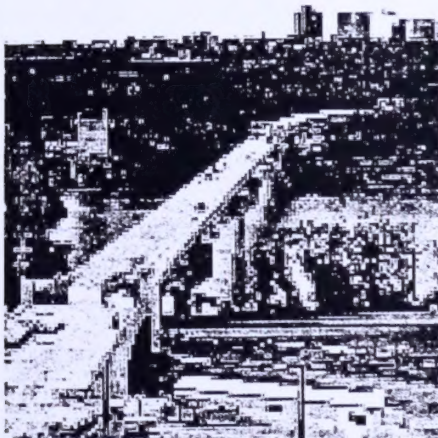
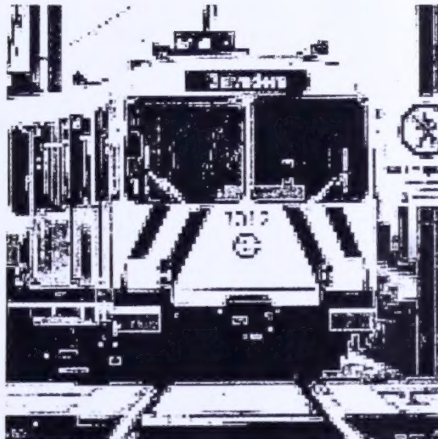


C-02661

CANADIANA

FEB 20 1997



**ALBERTA  
TRANSPORTATION  
AND UTILITIES  
ANNUAL REPORT  
1992/93**



# 1992/93 ANNUAL REPORT

**Alberta**  
TRANSPORTATION  
AND UTILITIES  
ISSN 0836-1509





Office of the Minister  
420 Legislature Building  
Edmonton, Alberta  
T5K 2B6

---

403/427-2080

The Honourable  
Gordon Towers  
Lieutenant-Governor  
Province of Alberta

Sir:

I have the honour to submit to you the Annual Report of Alberta Transportation and Utilities for the fiscal year ending March 31, 1993.

A handwritten signature in dark ink, appearing to read "Peter Trynchy". The signature is fluid and cursive, with a large loop at the end.

PETER TRYNCHY  
Minister of Transportation  
and Utilities





Digitized by the Internet Archive  
in 2014

<https://archive.org/details/albertatransport199293>

## DEPUTY MINISTER'S MESSAGE

This year marked a further shift in departmental operations, moving more towards the role of maintenance of our extensive road infrastructure. It also saw a continuation of the restructuring of the department towards a more streamlined and efficient organization.

With the phasing out of the south central region, the Calgary district was transferred to the southern region and the Hanna district was transferred to the central region. This change enables delivery of products and services to the public in a more cost-effective manner, while maintaining high service standards.

The department's, (and the provincial government in general) policy to privatize services wherever operationally possible continued to be a priority.

The 1992/93 fiscal year also saw a significant shift in how Alberta Transportation and Utilities interacts with its stakeholders and clients. A partnership was formed between the department and the logging industry to encourage road safety in relationship to this industry.

The department undertook a detailed examination of alternative transport financing methods for potential use in Alberta. This initiative was in recognition that government spending will continue to be tightly controlled. Options were identified which would allow for increased cost recovery, more cost-sharing, and partnerships with the private sector. These options are now being examined by the department for implementation, to sustain Alberta's excellent road system.

Significant progress was also made by the department in achieving its vision of barrier-free transportation systems and pedestrian environments for seniors and persons with disabilities. A number of demonstration projects were implemented to test the market, technology and viability of accessible transport services. These projects are documented in the contents of this report. Issues and solutions related to the delivery of accessible transport services were discussed at eight rural workshops in the various regions of the province.

The department continued to face pressures to make improvements to the highway system to accommodate development and growing traffic volumes. At a time of fiscal restraint, planning and public consultation have taken on added importance to ensure that scarce resources are applied in the best way possible. During the year, major planning efforts were undertaken in the Bow-Canmore corridor in response to tourism developments and growing population, and for Highway 2 south of Red Deer in response to increased traffic.

By streamlining the procedures and simplifying the processes where possible, Alberta Transportation and Utilities has continually been moving towards a greater degree of effectiveness with its client base.

This annual report reflects the quality of transportation and utilities systems and services provided to the people of Alberta in 1992/93.



Harvey M. Alton

# CONTENTS

<b><u>PROVINCIAL TRANSPORTATION</u></b>	<b><u>7</u></b>
Construction and Maintenance:	
Accomplishments and Initiatives	
Policy and Planning	
Engineering	
Fleet and Materials Resources	
Research and Development	
<b><u>MUNICIPAL INFRASTRUCTURE</u></b>	<b><u>26</u></b>
City Transportation	
Rural Transportation	
Municipal Water and Wastewater Assistance	
<b><u>MOTOR TRANSPORT SERVICES</u></b>	<b><u>30</u></b>
Alberta Motor Transport Board	
<b><u>RURAL UTILITIES</u></b>	<b><u>34</u></b>
Rural Gas	
Rural Electrification	
Grants to Individuals	
<b><u>ADMINISTRATIVE SERVICES</u></b>	<b><u>36</u></b>
<b><u>APPENDICES</u></b>	<b><u>39</u></b>



# **PROVINCIAL TRANSPORTATION**

## **REGIONAL REORGANIZATION**

With the retirement of the regional director for the south central region, the division took the opportunity to reorganize its structure in 1992/93. The south central region was phased out with the Calgary district transferring to the southern region and the Hanna district transferring to the central region. The new organizational structure recognizes work levels are declining and will enable the division to deliver its products and services to the public more cost effectively while continuing to maintain high service standards. The reorganization was implemented with minimal impact to the public.

## **CONSTRUCTION AND MAINTENANCE: ACCOMPLISHMENTS AND INITIATIVES**

### **Construction**

Road and bridge construction and a variety of preventative maintenance measures provide safe and efficient transportation systems for users of Alberta's highways. During the year, many construction and maintenance initiatives were completed to satisfy this departmental objective.

A total of 184 major contracts were undertaken in 1992 of which 50 were administered by the municipalities and managed by their consultants. Construction was undertaken on 2747 kilometres of primary and secondary highways, resource, park and approach roads. In 1992, 27.1 million cubic metres of earth were moved primarily by contract and about six million cubic metres of grading were undertaken by private sector contractors. A quantity of granular base course construction totalling 6.74 million tonnes was placed in 1992. Approximately 308 thousand tonnes of cement stabilized base course was laid and 4.40 million tonnes of asphaltic concrete were mixed and placed.

The following major initiatives were undertaken in 1992/93:

- **HIGHWAYS 1 AND 16 FOUR-LANING PROGRAM:** The major initiative to four-lane Trans Canada Highway 1 and 16 was completed in 1991. This program was initiated in 1981 as a 10 year government commitment. Under this program, a total of 403 kilometres of the Yellowhead Highway (Trans Canada Highway 16) and 258 kilometres of Trans Canada Highway 1 have been four-laned.



Additional work was undertaken in 1992 to four-lane Highway 16 south of Vegreville and Highway 1 east of Highway 41 to Irvine.

● **ALBERTA PACIFIC PULP MILL TRANSPORTATION INFRASTRUCTURE:**

Construction was started on the transportation infrastructure required to serve the Alberta Pacific Pulp Mill at Athabasca in 1991. Two new grading contracts were awarded in 1992 to private contractors and five new grading projects were started using private equipment. A total of 35 kilometres of grading and 15 kilometres of surfacing were completed.

● **HIGHWAY 63 WIDENING PROGRAM:** The program to widen Highway 63 to Fort McMurray was continued. Approximately 31 kilometres of construction was completed on two carry-over projects. In total, 154 kilometres have been completed with a remaining 18.3 kilometres left to complete this highway to a modern two-lane standard.

● **EXPORT HIGHWAY PROGRAM:** This program, designed to complete four-laning of Highway 2 and Highway 3 from Calgary to Lethbridge, was initiated in 1989. Construction was undertaken on three projects on Highway 2 from north of the Oldman River to south of Claresholm in 1992. This brings the total to 72.6 kilometres of four-laning on Highway 2.

● **SECONDARY HIGHWAYS SURFACING PROGRAM:** In 1992/93, 655 kilometres of base course and 300 kilometres of final paving were completed. Sixty per cent of the secondary highway system is now surfaced.

● **AVIATION:** In 1992/93, additional runway lighting was installed at Whitecourt, fog seals were applied to Lloydminster, Pincher Creek, Rocky Mountain House, Swan Hills, Bow Island and Three Hills, and a runway overlay was completed at Hanna. Drainage improvements began at Cooking Lake, Manning and Red Deer. Runway insulation was completed at Killam/Sedgewick and an emergency airfield lighting system was installed at the Chipewyan Lake airstrip. The installation of a microwave landing system for the Whitecourt Airport was started. Financial assistance was provided to Olds/Didsbury for the paving of a taxiway.

● **SKID RESISTANCE PROGRAM:** This year, a seal coat surface was applied to 659 kilometres (two-lane equivalent) of paved primary highways, 4.23 kilometres of local roads, and 3.79 kilometres of approach roads. All work was completed by contract

through the private sector.

● **CONSTRUCTION OF REST AREAS:** During 1992/93 fiscal year, \$751 554 was expended for construction at the department's seven rest areas. Survey, design, grading, GBC, ACP and curb and gutter work at the Kininvie rest area undertaken at a cost of \$651 425. A grant of \$10 000 was provided to the Town of Raymond as per the Raymond Campsite transfer agreement. A carry-over grant of \$16 596 was provided to the Town of Claresholm for rest area construction. Landscaping and tree planting expenditures at the Edson rest area totalled \$13 365. Other minor expenditures were incurred at the Rosedale Suspension Bridge, Wandering River and High Level rest areas.

Alberta Transportation and Utilities' remaining 37 campgrounds were divested to Alberta Environmental Protection and local authorities.

The seventh annual Highway Rest Stop Program took place on the Victoria Day long weekend at the Dickson/Stevenson Stopping House, Edson, Wandering River and Valleyview rest areas. Through this program, the Independent Order of Foresters, in co-operation with local businesses, provide free refreshments to travellers who stop at rest areas during the weekend making highways a safer place to travel.

## **Maintenance**

The department maintains 38 000 kilometres of primary highways, approach roads and improvement district roads through a network of 114 departmental maintenance facilities.

Other maintenance responsibilities include 16 provincial airports, 62 forestry airstrips, seven ferries, six rest areas and the Civilian Air Terminal at Medley.

● **MAINTENANCE OF PROVINCIAL AIR FACILITIES:** Alberta Transportation and Utilities operates and maintains 16 certified provincial airports and 62 forestry airstrips to provide forest protection, medivac and general access to remote communities, recreation and business use and regular scheduled flight service. In addition crop spraying operations are conducted from some of these facilities.

● **HIGHWAY CLEAN UP CAMPAIGN:** During the 1992/93 Highway Clean Up Campaign, a total of 7824 children and 4666 adults representing 508 clubs participated in cleaning Alberta's primary highway



rights-of-way. A total of 7882 kilometres were cleaned with 55 672 bags of litter collected.

● **MAINTENANCE AND OPERATION OF FERRIES:** During the 1992/93 fiscal year approximately \$1.8 was expended for the operation and maintenance of the department's seven ferries.

The operation of the Finnegan Ferry continued to be contracted to the private sector. Structural repairs, painting and sandblasting work was undertaken at the Shaftesbury and La Crete ferries. A steel ferry was constructed at a cost of \$582 726 and put in to service at the Crowfoot crossing.

● **HIGHWAY LINE PAINTING:** Highway line painting was again contracted out to the private sector during the 1992 paint season. Line painting contracts were successfully completed in the Southern and Northwest regions. The two contracts involved the repainting of all lines on 1464 kilometres of the provinces primary highway system. The private sector helped to supplement the department's efforts to complete the line painting program.

The following table shows the kilometres of line painted by regional paint crews.

1992/93 PROVINCIAL LINE PAINTING

(Length of Roadway Painted by the Regional Paint Crews)

Region	New Construction (KMS)	Repainting (KMS)	Total (KMS)
Southern	647	753	1 400
South-Central	601	2 001	2 602
Central	497	1 366	1 863
North-East	446	1 710	2 156
North-West	564	1 594	2 158
Peace River	388	1 688	2 076
	3 143	9 112	12 255

\*All figures represent three line kms

#### ● SNOW AND ICE REMOVAL

The following table shows the total metric tonnes of salt used by the regions. The figures for 1992/93 show the actual amount of salt placed on the road (previous years' totals include unused salt remaining in treated sand piles). In 1992/93, the province used 73 050 metric tonnes of salt where 15 811 metric tonnes (22 per cent) were used to treat winter sand. This is an 11 per cent reduction in salt quantity and a

12 per cent reduction in salt expenditure over 1991/92.

Provincial Salt Use

Region	89/90	90/91	91/92	92/93*
Southern South	7 740	6 160	5 020	2 830
Central	19 830	13 470	10 370	11 140
Central	12 870	8 610	7 290	7 190
North East	10 060	7 590	9 420	8 610
North West	28 100	22 780	18 940	16 550
Peace River	28 100	27 150	30 860	20 460
	106 700	85 760	81 900	66 780

\* The portion of salt remaining in the unused treated sand was not included.

The following table shows the total metric tonnes of treated sand placed on the road. The 1992/93 provincial total is an approximate seven per cent increase in usage over 1991/92. The regions utilized 57 per cent of the material in the total treated sand inventory for 1992/93.

Provincial Winter Sand Use

Region	91/92	92/93
Southern	19 430	20 520
South Central	26 800	54 740
Central	36 090	35 880
North East	48 150	45 110
North West	47 200	50 660
Peace River	46 900	32 240
	224 570	239 150

#### Traffic Operations

In support of the ongoing contracting initiatives, design and construction standards for guardrail installation, large sign placement and pavement marking were completed which will facilitate design, contracting and construction management by outside agents.

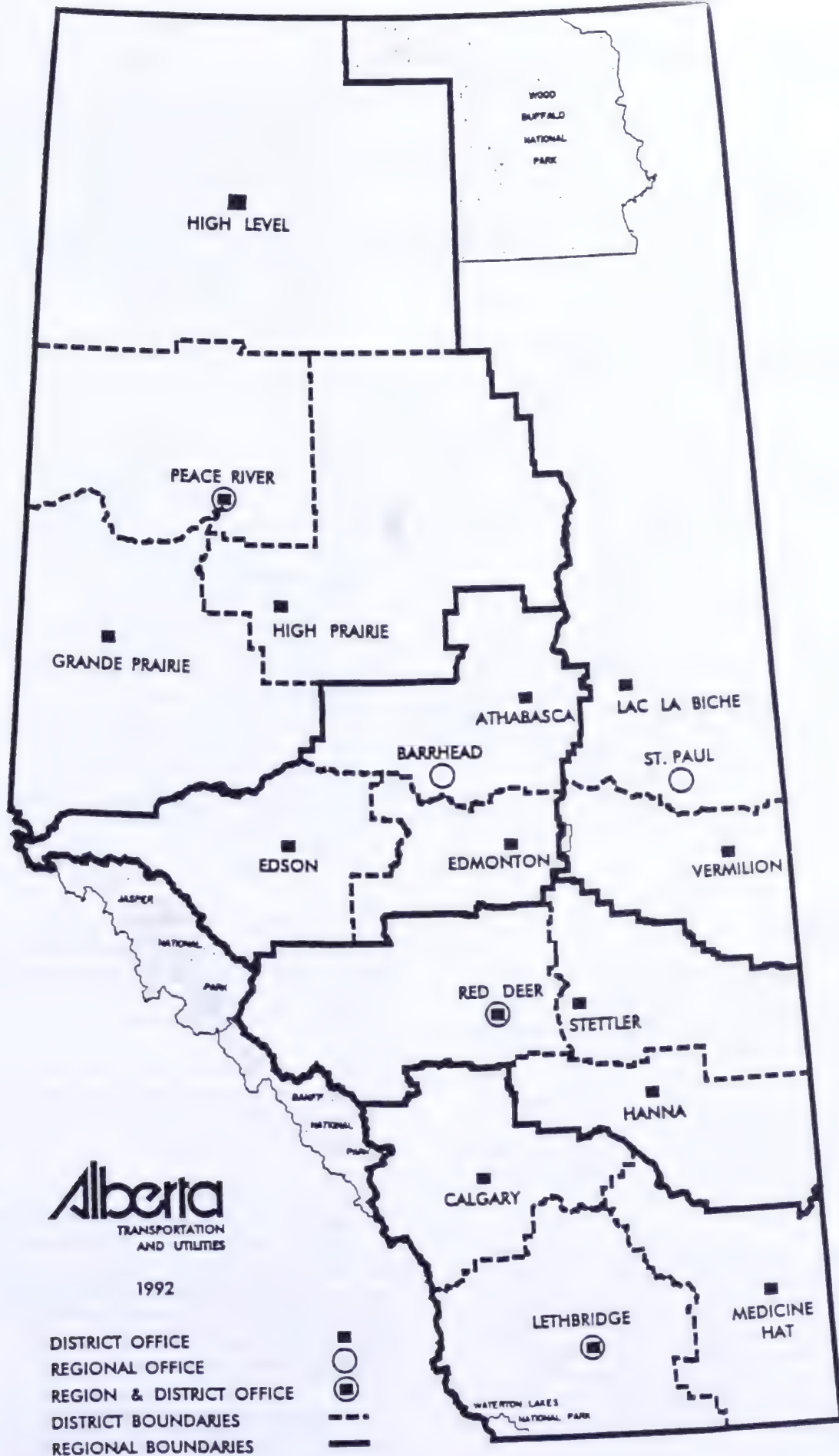
Development neared completion on a system of highway maintenance standards and guidelines aimed at having a uniform approach to all aspects of highway maintenance on the primary highway system. These standards and guidelines are expected to improve the efficiency and effectiveness of

maintenance programs while ensuring a high level of safety for highway users.

To improve traffic flow and reduce safety concerns, four new traffic control signals and four pedestrian crosswalk signals were installed. This brings the totals to 67 full traffic signals and 56 pedestrian crosswalk signals operated by the department on primary highways. Also during the year safety improvements to 36 railway crossings were initiated. As part of the ongoing assessment of highway speed limits the highway speed limit was revised at 24 locations due to either highway improvements being completed or changes in traffic conditions.

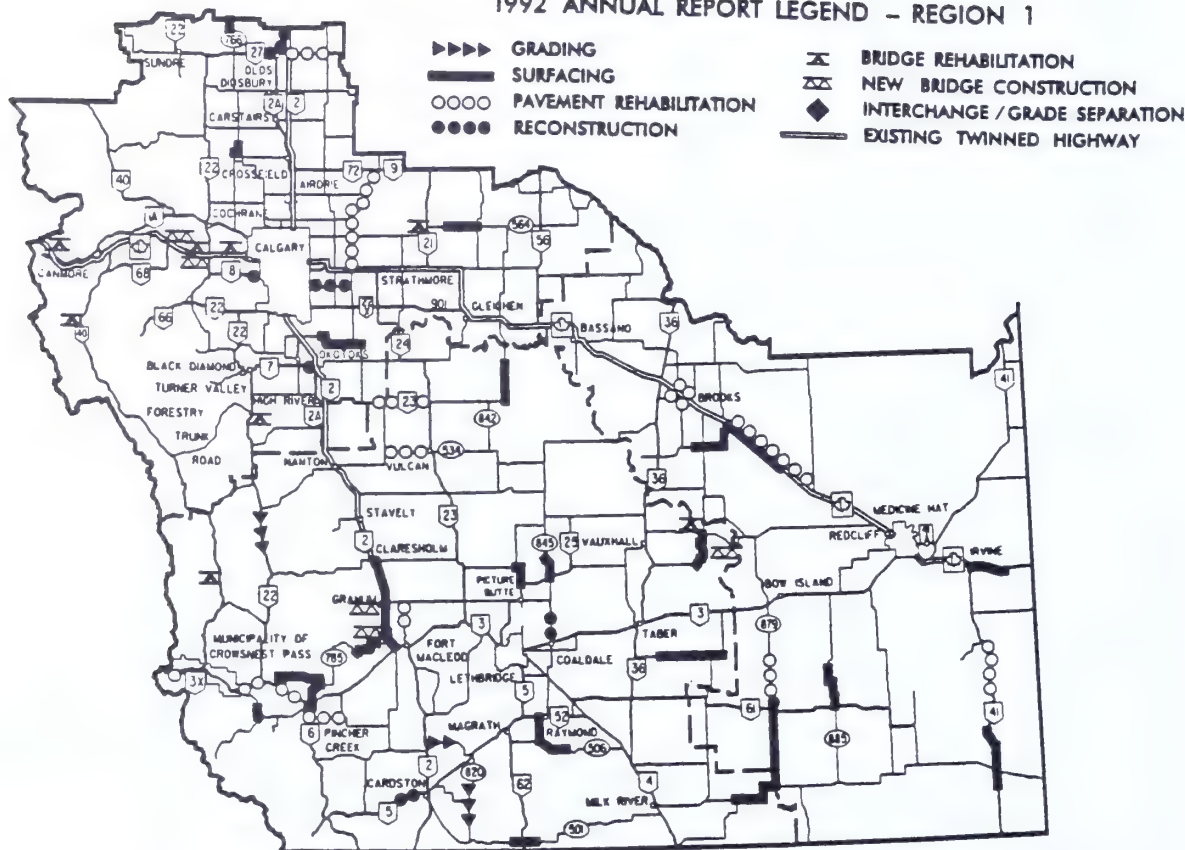
The primary highway lighting program included improvements to lighting systems at 23 locations as well as new lighting at 11 locations. All of the new lighting systems involved cost-sharing with local authorities. Major street lighting projects were completed in Claresholm, Athabasca, Peace River, Olds, High Level, Barrhead and Red Deer. To reduce overall costs, testing of minimal lighting systems is underway at a number of locations. These will be evaluated to determine if a reduced number of street lights can provide a suitable level of illumination for safety and operational requirements at certain remote intersections.





# SOUTHERN REGION

## 1992 ANNUAL REPORT LEGEND - REGION 1



## CONSTRUCTION

The region completed 27 of 41 contracts during the year. These contracts involved 52 kilometres of grading, 130 kilometres of base course, 98 kilometres of paving, 295 kilometres of pavement overlay, 44 kilometres of combined construction, 11 kilometres of widening and reconstruction, and 350 kilometres of seal coat. Other work included the application of slurry seal, gravel crushing and stockpiling projects. Guardrail, signing and seeding were included in these contracts as required.

The weather conditions in Southern Alberta were generally wetter than normal which delayed some projects until late fall. Despite the unusual weather only 14 projects were carried over to the 1993/94 construction season. Major twinning construction continued on the Trans Canada Highway east of Medicine Hat, and the Export Highway between the Oldman River west of Fort Macleod to south of Gratum.

The last project from east of Irvine to the Saskatchewan border was tendered and the official Trans Canada Highway opening ceremonies, "Twinning to the Peaks", took place June 9, 1992 at the Ranchland Teepee rest area.

Work on the reconstruction of the Oldman River Dam secondary highway roadway network continued with the completion of 24 kilometres of base course and nine kilometres of paving.

Engineering consultants assisted local counties and municipal districts to manage 20 contracts as well as provided engineering services for preliminary survey and design on 10 projects. Regular grants and special funding was provided to the counties, municipal districts, towns and villages for road street improvement projects, dust control programs and secondary highway maintenance.

One other highlight of the construction season was the major archaeological survey, funded by the department, undertaken at the junction of Highways 2

and 3 west of Fort Macleod.

The more significant bridge projects undertaken in the region include the Ronalane Bridge that was reconstructed over the Bow River, east of Hays, resulting in an improved road alignment on SH 524. Two bridges were replaced on Highway 1 west of Calgary. Included in this project were grading, base course and paving of the acceleration and deceleration lanes. These bridges allow a local road to cross under the highway. A number of other standard bridges were built and bridge-size culverts were installed, in particular a large multiplate pipe across Highway 36 north of Vauxhall.

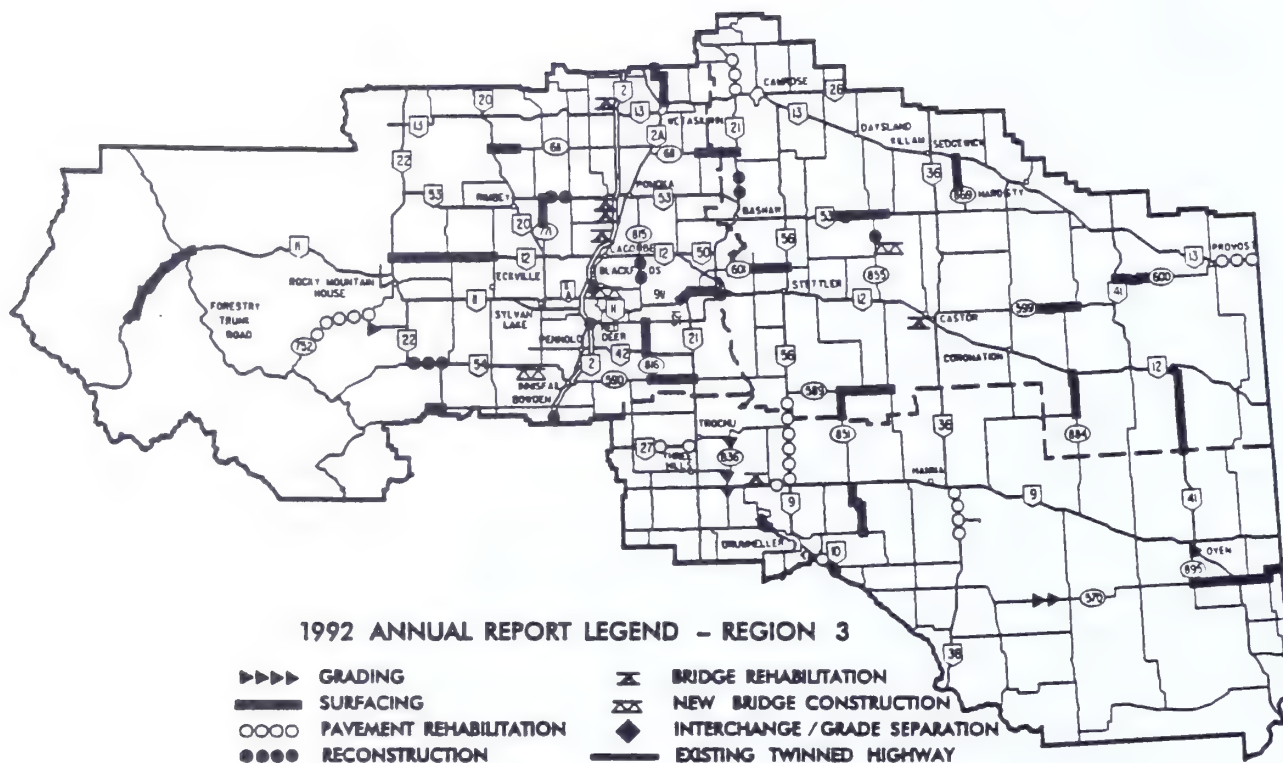
## MAINTENANCE

Generally, winter conditions were closer to normal with regular small amounts of snowfall and short cold periods. The region continued with the privatization of summer maintenance tasks. The 1992/93 season was the start of the second cycle for contracting out the operation of the Finnegan Ferry to the private sector. Analysis of the success of this operation may allow us to consider a three-year operating term, which could remain in effect until the end of the 1994 operating season. The Lethbridge and Medicine Hat Districts combined in tendering a contract for 1233 kilometres of centre line repainting. This proved to be a very cost-effective project and tendering of additional centre line painting is proposed. A number of erosion projects, involving installation of erosion blankets, gabion structures, ditch blocks, culverts and down drains of a preventative and remedial nature were completed.

As part of the bridge maintenance program, work was carried out on a number of bridge decks. Several long-span steel bridges were also painted.



# CENTRAL REGION



## CONSTRUCTION

The region completed 55 major contracts. Of these projects, 33 were managed by district staff and 22 were administered by counties and municipal districts with the assistance of engineering consultants.

A total of 88 kilometres of grading, 203 kilometres of base course and 180 kilometres of final paving was completed. Widening and reconstruction on 35 kilometres and 101 kilometres of pavement rehabilitation was completed with 12 kilometres of sideslope improvements. Six seal coat contracts, involving 132 kilometres of secondary highways, were tendered and managed by the municipalities with the assistance of their consulting engineering firms. Under contracts administered by the department, 192 kilometres of primary highways and approach roads were seal coated.

Surfacing was started on SH 911 with the first section from Haynes junction to Highway 21 completed.

Major upgrading was continued on Highway 21 with the reconstruction and widening from Highway 53 to south of Ferintosh. This completes the upgrading from Bashaw to Highway 13. Additionally, intersection improvements were undertaken at the junction of Highway 21 and Highway 13, and a passing lane installed on Highway 21 north of Highway 13.

Major bridges were completed at the Battle River on SH 855 and the Little Red Deer River west of Innisfail. Extensive bridge repairs were completed at Castor Creek on Highway 12 near Castor. Five standard bridges and culverts were constructed or replaced on the primary highway system. Eighteen standard bridges and culverts were constructed or replaced on the secondary highway and local road network.



## **MAINTENANCE**

Extensive patching on Highway 2 with an improved patch and seal operation was successful and will postpone the need for pavement rehabilitation for a number of years.

Three major erosion problems in the Hanna District were repaired using sub-surface drainage and surface protection techniques.

Good driving conditions were maintained throughout the winter. The use of salt was minimized to avoid problems with residue on the highway and excess leaching.

An emergency response team made up of technical staff was organized to assist with traffic direction and control during winter storms and in emergency situations. The response team manned barricades through the night on the few occasions that Highway 2 became impassable. This provided excellent support for the snowplow operators.

Efforts toward improved safety were recognized with a lower incidence of employee, vehicle, bridge and construction zone accidents.

Construction was undertaken on 15 major contracts on primary and secondary highways, approach and resource roads.

Two grade widening projects on Highway 63 were completed on a total length of 31 kilometres. This leaves one final grade widening project of 18.3 kilometres from north of Algar Tower to south of the 22nd Baseline to complete the widening of Highway 63 to Fort McMurray.

The final base course project on Highway 55 near Rich Lake was completed. Highway 55 is now surfaced between Highway 36 and Highway 28 at Cold Lake.

During 1992/93 a total of 80 kilometres of grading, 141 kilometres of base course, 237 kilometres of final paving and 48 kilometres of combined construction were completed. Thirty-eight kilometres of the combined construction involved widening and reconstruction. As well, 35 kilometres of pavement rehabilitation and 44 kilometres of seal coat was also completed.

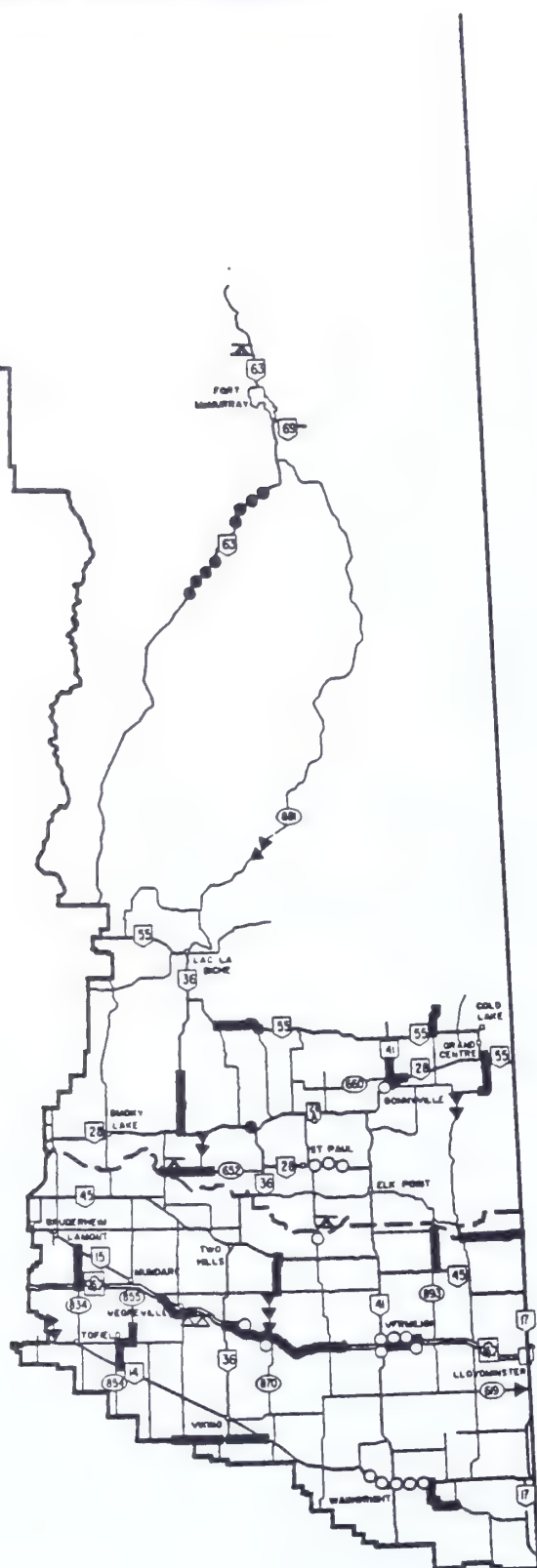
In addition, in ID 18 South seven lump sum grading contracts were completed on a total of 13 kilometres of local roads and 24 kilometres of grading were undertaken by day labour. Approximately 1100 kilometres of local roads were regavelled. Dust abatement projects totalled 62 kilometres. Calcium chloride was also used for dust abatement on a selected basis.

Bridge construction was completed on the Jackfish Creek at LaCorey. Construction or reconstruction of four bridges and 11 standard bridge culverts were completed.

## MAINTENANCE

Summer maintenance included crackfilling, mowing, patching, guardrail, sign replacement and centre line painting. Winter maintenance was undertaken and department maintenance standards were achieved.

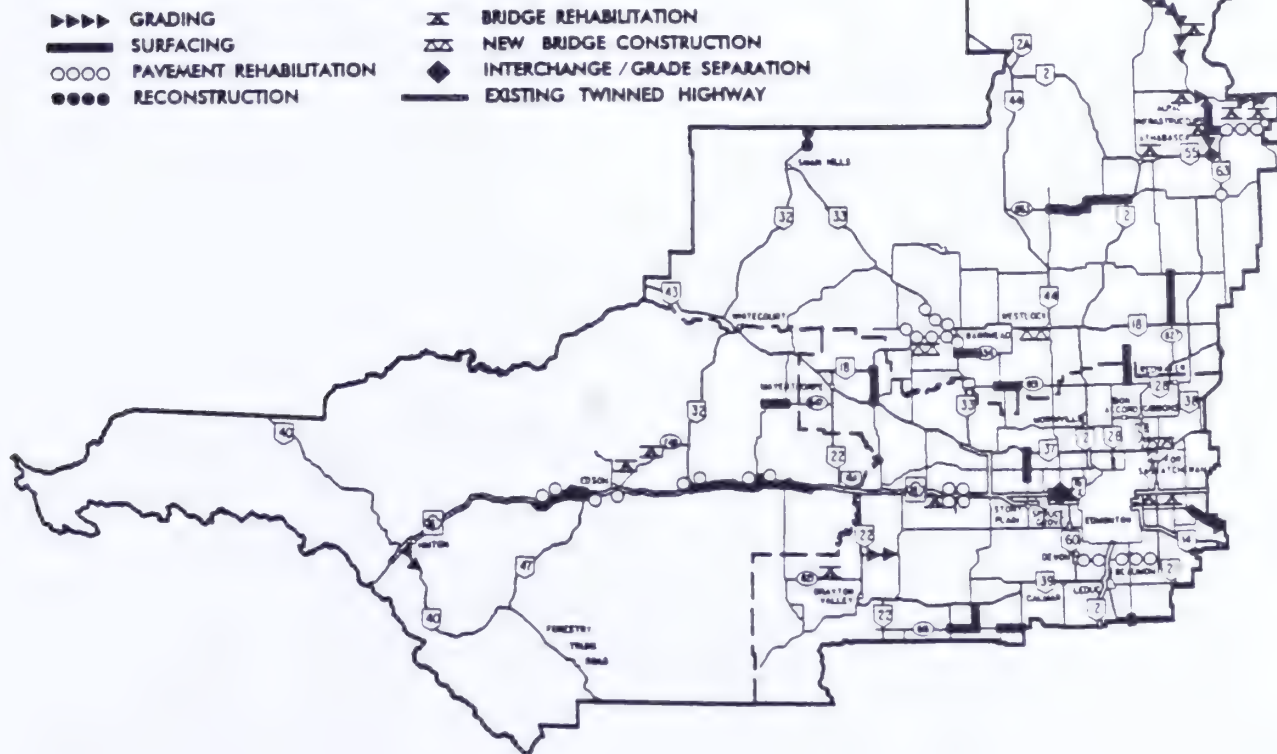
Repairs were also made on eight standard bridges and one standard bridge culvert.



1992 ANNUAL REPORT LEGEND - REGION 4

▶▶▶▶ GRADING	⌵ BRIDGE REHABILITATION
— SURFACING	▬ NEW BRIDGE CONSTRUCTION
○○○○ PAVEMENT REHABILITATION	◆ INTERCHANGE / GRADE SEPARATION
●●●● RECONSTRUCTION	══ EXISTING TWINNED HIGHWAY

## 1992 ANNUAL REPORT LEGEND - REGION 5



## CONSTRUCTION

The Highway 16 Yellowhead/Trans Canada Twinning program was completed with the final paving of 75 kilometres from Highway 32 to Wildwood.

Road construction on the AL-PAC infrastructure progressed in 1992/93 on 43 kilometres of grading. Nine projects made up of seven local equipment spreads and two contracts completed 35 kilometres of grading. One base and paving contract of 15 kilometres was completed on the main mill access road. A total of 255 000 tonnes of gravel was stockpiled for future use on the road infrastructure. The department has used its own personnel as well as six engineering consulting firms to undertake the preliminary survey, design and project management since work started on the infrastructure. CN completed the majority of work on the 36 kilometres of spurline from Boyle to the Mill. As well, the steel girders were erected on the new Athabasca River Bridge crossing on the Calling Lake Connector.

Construction work commenced on a major interchange project at the intersection of Highway 16X and SH 794. This project, a major safety improvement, is required to accommodate the large gravel trucking industry from the Villeneuve area as well as users of SH 794 and Highway 16X. The project is scheduled to be completed by the fall of 1993.

In total, work was undertaken on 53 major projects involving 51 kilometres of grading, 100 kilometres of base course, 146 kilometres of final paving and 47 kilometres of combined construction. Approximately 46 kilometres of pavement rehabilitation and 115 kilometres of seal coat construction was also completed.

In the Improvement Districts 76 kilometres of local roads were upgraded, 1263 kilometres were regavelled and 88 kilometres were dust controlled (calcium chloride).

Bridge construction was completed on Astotin Creek at Fort Saskatchewan and January Creek at Peers. Construction or reconstruction of 25 bridges and 43 bridge-size culverts were completed.

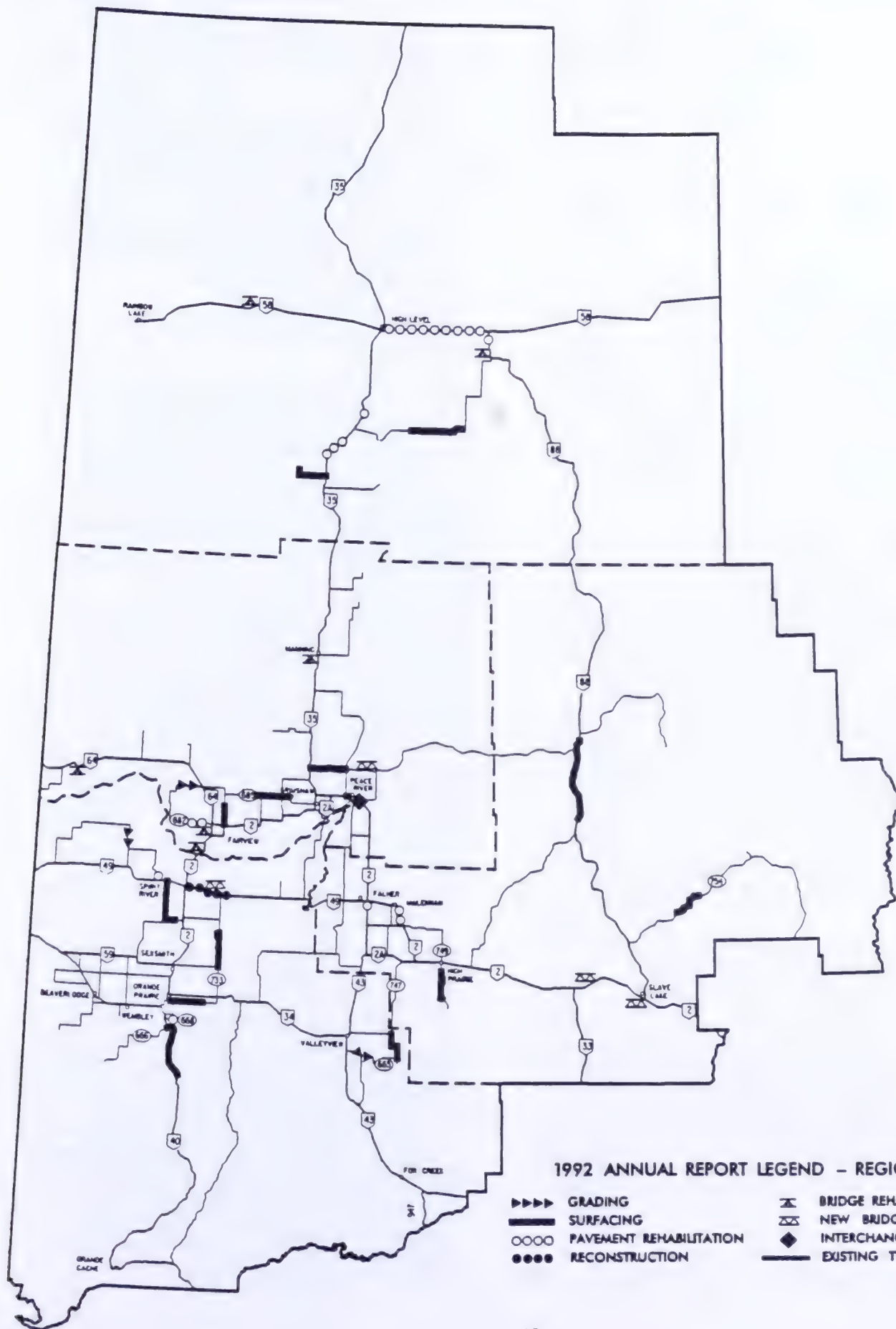
## **MAINTENANCE**

Summer maintenance activities consisted of crackfilling, mowing, patching, guardrail, signing and painting, which were accomplished with few problems. A milder winter allowed activities to be completed within budget at acceptable levels of service.

Repairs and maintenance were also made on 118 standard bridges and 24 bridge-size culverts.



# PEACE REGION



## 1992 ANNUAL REPORT LEGEND - REGION 6

- |      |                         |    |                                |
|------|-------------------------|----|--------------------------------|
| ▶▶▶▶ | GRADING                 | △  | BRIDGE REHABILITATION          |
| —    | SURFACING               | △  | NEW BRIDGE CONSTRUCTION        |
| ○○○○ | PAVEMENT REHABILITATION | ◆  | INTERCHANGE / GRADE SEPARATION |
| ●●●● | RECONSTRUCTION          | == | EXISTING TWINNED HIGHWAY       |

## **CONSTRUCTION**

This year saw an emphasis on pavement rehabilitation in the Peace Region. Also, Highway 88 received approximately 45 kilometres of final pavement.

Construction on primary and secondary highways, approach, tourism, local and resource roads included a total of 30 kilometres of grading, 71 kilometres of base course and 170 kilometres of paving. Pavement rehabilitation included 93 kilometres of pavement overlay.

In Improvement Districts and Indian Reserves, a total of 99 kilometres of grading, 3160 kilometres of gravelling and 119 kilometres of dust control were completed. Twenty-six lump sum grading contracts were tendered this year. Use of the quotation method to select equipment for day labour hire continues to be successful. The region has expanded the use of regravelling contracts and has found this practice of tendering local road construction and regravelling has resulted in cost savings.

The bridge over the Peace River on SH 686 was completed and opened to traffic. The construction of the Saddle River Bridge on Highway 49 east of Rycroft was completed. Work commenced on Highway 88 Bridge over Sawridge Creek Floodway and will be open for traffic next year. The superstructure of the Assinneau River Bridge on Highway 2 near Canyon Creek was replaced. The CNR subway, second access into Peace River, off of Highway 2 was opened to traffic. Four smaller bridges and 22 bridge size culverts were installed.

## **MAINTENANCE**

Summer weather conditions were generally favorable and maintenance programs were successfully completed.

A seasonable to mild winter resulted in considerable savings on winter maintenance costs.

Major maintenance expenditures for bridges included repairing and strengthening the Clear River Bridge on Highway 64 northwest of Hines Creek. Concrete patching and some painting were undertaken on the Dunvegan Bridge on Highway 2 over the Peace River. Similar activities were completed on the Peace River Bridge in the Town of Peace River.

## **POLICY AND PLANNING**

### **NATIONAL AND PROVINCIAL POLICY**

With its mission to provide an efficient integrated transportation system for Albertans today and in the future, the department takes an active role in all modes of transportation. It represents the province's needs and interests in national forums, and develops provincial policies which respond to changing trade and travel patterns. The department's overall aim is to ensure that Albertans have access to the transportation systems and services they require to access domestic and international markets and destinations.

Further progress was made toward a National Highway Policy and a national highway system consisting of key interprovincial and international links essential for trade, tourism and travel. While such a national policy has not yet been agreed upon, several National Highway System projects were undertaken in Alberta under the joint federal-provincial Strategic Highway Improvement Program (SHIP), which was signed in March 1993. Negotiations continue for a more comprehensive program recognizing the federal government's responsibility to invest in highways.

Recognizing that government spending will continue to be tightly controlled, the department undertook a detailed examination of alternative transport financing methods for potential application in Alberta. Options were identified which would allow for increased cost recovery, more cost-sharing, and partnerships with the private sector. The department is now examining how these options can be implemented in such a way as to sustain Alberta's excellent road system in particular.

The department made real progress in achieving its vision of barrier-free transportation systems and pedestrian environments for persons with disabilities and seniors. A number of demonstration projects were implemented to test the market, technology and viability of accessible transport services, including: an accessible taxi project in Edmonton; a full-size, low-floor transit bus in St. Albert; an accessible community bus in downtown Calgary; and a lift-equipped, inter-city coach in the Edmonton-Calgary corridor. Eight rural workshops were held to discuss issues and solutions related to the delivery of accessible transport services in the various regions of the province.



In the fall of 1991, the federal government established a commission to review the *National Transportation Act, 1987*, the *Motor Vehicle Transport Act, 1987*, and related legislation affecting shippers, travellers and carriers. After canvassing the Alberta transport community through meetings, symposiums and workshops, the department provided a comprehensive brief to the Commission on behalf of the Government of Alberta. The department was pleased when the Commission issued its report in January, 1993, supporting Alberta's central recommendation that Canada hold the course on transport deregulation, while ensuring that transport costs are minimized for both shippers and travellers.

Because a competitive airline industry is important for both Canada and Alberta, the department played a key role in the efforts of Canadian Airlines International (CAI) to restructure itself and complete a marketing, services and equity agreement with American Airlines (AMR). After co-sponsoring an air policy workshop, consulting with affected interests, commissioning an economic impact study, and sponsoring an evaluation of the proposed alliance versus alternatives, the department appeared at the Competition Tribunal and the National Transportation Agency hearings to support the position of CAI.

The department provided further input to the ongoing Canada/U.S. air bilateral negotiations, which were temporarily put on hold due to the Fall, 1992, change of U.S. administrations. The department continued to work with the key parties in order to maintain momentum towards a quick completion of the process. These negotiations are expected to lead to a less restrictive agreement and the opportunity for airlines to improve services between Alberta and the U.S. As such, they are crucial to the future growth of Alberta's economy, especially the tourism sector.

The department participated in the National Rail Network Study, initiated in 1991 upon approval by the Council of Ministers Responsible for Transportation and Highway Safety. Together with Transport Canada, the national railways, other provinces and the territories, the department sponsored a study to define an essential railway network for Canada, with a report to be delivered in late 1993. The report is expected to include criteria for lines to be included in the network, as well as suggested improvements to the rail rationalization process. All of this is necessary if our railways are to be competitive in the North American environment and serve the future needs of Alberta shippers.

The department worked towards a new *Alberta Railway Act*, which would apply to short-line railways

incorporated within the province. Currently, Central Western Railway is the only such public carrier, but more are expected to be formed as the national railways abandon light-volume trackage. The department consulted with operators of industrial spurs and amusement railways to assess whether these operations should be covered in a modernized act.

## PLANNING ALBERTA'S TRANSPORTATION SYSTEM

The department's consolidated planning area continued to provide external and internal clients with a range of services, including long range plans for the province-wide highway system, site-specific plans and public consultations to resolve traffic and safety issues, traffic analysis and forecasts, and the management of roadside development and access. Progress was made in ongoing efforts to simplify processes for clients and to reduce costs.

Long range planning of Alberta's highway system helps guide the department in setting priorities and applying limited resources to the highway priority needs. During the year, the second phase of this twenty-year plan was completed, focusing on secondary highway needs. The plan uses economic, population and traffic trends in forecasting Alberta's future transportation needs.

A number of regional road reviews were completed at the request of Regional Operations and for urban-fringe municipalities. Of particular interest were evaluations of the Bow-Canmore Corridor and Highway 2 south of Red Deer. Major tourism projects being proposed for the Bow-Canmore area are expected to put growing pressures on the Trans Canada Highway, in particular on interchanges, and on adjacent local roadways. Increasing traffic volumes and a growing accident rate south of Red Deer prompted the department to evaluate alternatives for improvements, including a highway realignment. Significant public participation was undertaken to ensure that the needs of the local communities and businesses along the highway were accommodated.

Other major planning initiatives included the realignment of Highway 63 through Syncrude's proposed mining areas, a new interchange at Fort Macleod in conjunction with realignment and four-laning of Highway 3 to Monarch, Highway 60 through the Enoch Reserve, and Highway 43 through Whitecourt.

The future of transportation systems in northeastern Alberta remained a topic of discussion among the



department, local interests and the federal government. Service to Fort Chipewyan is now provided by winter road and summer barging on the Athabasca River. The federal government wishes to curtail dredging of the river, as a cost savings. To date, options have been examined, including all-weather road alignments which have been shown to be extremely costly.

The planning of a safe and efficient highway network for Alberta is founded on sound traffic data, analysis and forecasts. The department conducts an extensive annual program of traffic data collection, focusing on areas of changing economic activity, traffic patterns, vehicle mixes or safety statistics. Progress was made during the year on reducing costs and enhancing the computerized tools used to compile and analyze traffic information.

Planning also includes the management of access to the highway system and approvals of utility installations and other highway roadside developments, as provided in the Public Highways Development Act. The review and approval process requires close co-ordination with municipal planning authorities, the utility industry and private developers. These planning activities ensure that safety, traffic flow and other public objectives are met. During the year many proposals from the private sector for access and for commercial and residential development along highways were received and reviewed.

Through direct involvement with such associations as the Transportation Association of Canada (TAC), this department plays a strong role in the development of national planning standards. The department is also a leader in the use of technological advances such as Global Positioning by Satellites (GPS) which provides accurate location surveying more effectively and at less cost.

## ENGINEERING

### QUALITY ENGINEERING FOR QUALITY TRANSPORTATION SYSTEMS

The planning, design, construction, maintenance and operation of safe, cost-effective transportation systems requires quality engineering. An efficient combination of private sector and in-house engineering services are used by the department to provide such systems.

During 1992/93, new and enhanced geometric design standards were developed and implemented for vertical alignment, local roads, road sizing for new construction, at-grade intersections and log haul truck characteristics. Work continued on the development of cost-effective geometric design improvements for existing paved roadways. Geometric assessment of programmed pavement rehabilitation projects was completed.

Enhancements were made to the Aggregate Information System (AIS) and the aggregate testing sub-systems, to provide better information for the allocation and use of aggregate supplies. Geotechnical soil logging programs were further enhanced to provide more efficient retrieval and use of borehole and laboratory test data. Work continued on the development of a Long Range Planning Module, to optimize expenditures on bridge maintenance, rehabilitation and replacement. A Bridge Paint Testing and Approval Program was initiated in co-operation with several other provinces, states, cities and paint manufacturers. The tracking of construction tenders at the preparation and award stages, was incorporated into the department's computerized Construction Program Management System, and major advances were made in the converting of tender preparation into a computerized system. Major rewrites to several construction specifications were incorporated into the second edition of the Standard Specifications for Highway and Airport Construction book, which was published in January 1993.

New technology applications contributed to more efficient, environmentally friendly and cost effective engineering processes and products. These included: use of a plastic liner method to rehabilitate failing wood and steel culverts, use of recycled plastic fence and guardrail posts, and the use of new testing procedures and equipment to measure in-situ soil strength parameters. Investigations also continued on several other new processes and products, including hot-in-place recycling of asphalt pavements, slurry seals for highways, pavement grid reinforcement, segregation repair, and airborne remote sensing for aggregate prospecting.

Improvements continued to be initiated in the cost, speed, and quality of construction surveys through development and implementation of sophisticated total station equipment and methods.

Training (through seminars/courses and manuals) of department, municipal and private sector staff, as a means of productivity and quality improvement, cost reduction, and technology transfer, continued to be a high priority. Courses included: bridge inspection,



specifications, roadways construction, gravel haul weigh scale certification, design and drafting, and materials testing.

Grading designs continued to be shared effectively between the district at about 75 per cent of the total design workload, and head office, which mainly provided design service for twinning, interchange and fast-track projects. The transfer of geotechnical site instrumentation and data collection, and erosion control measures, to the districts continued.

The ratio of end product specification, contractor-supply and municipally-administered contracts has continued to increase, and with it there continues to be a shift in responsibility to the contractors for such matters as aggregate testing, mix design and construction quality control. This has, in turn, continued to involve the extensive participation of private engineering consultants in these aspects of department programs. Fifty-one direct agreements, totalling almost \$2 million, were concluded with private consultants, and an additional \$9 million in engineering services were provided to 136 department-funded projects administered by rural municipalities. Overall in 1992/93 about \$24 million in engineering services were provided to department funded projects directly and indirectly through consulting agreements.

The department continued its focus on being environmentally and archaeologically sensitive in the planning, design and delivery of its programs. Within the period this included providing input to proposed legislative changes that affect department activities and facilities, formulating conservation and reclamation guidelines for borrow pit operations, using recycled materials, and undertaking major investigation and archeological mitigation programs on several construction projects. One of the latter was at the proposed new interchange at the junction of Highways 2 and 3 west of Fort Macleod.

Significant advances were made in the various policies and processes for managing the programming and design of the department's programs and projects. This included development and implementation of new aggregate supply specifications to encourage the locating of new gravel sources by our contractors, to provide better access to our market by the private gravel supply sector, and to recover the value of Crown-owned aggregate. It also included the development and implementation of an aggregate disposal policy to reduce any department aggregate stockpile surpluses without adversely affecting local suppliers, the development of an improved process of transferring Development and Reclamation Approvals on privately-owned gravel pits

from the department to the owner of the pit, and streamlining of the reclamation process for certain categories of gravel pits.

The approval process for the relocation of utilities within the highway right-of-way has also been streamlined to eliminate duplication.

## PROPERTY SERVICES AND RIGHT-OF-WAY ACQUISITION

The ongoing refinement of property management techniques emphasized a business-like approach to the acquisition of right-of-way, the management of property to be held for future transportation projects and the disposition of property surplus to the department needs. This was achieved by the further development of the Automated Land Information System (ALIS) and the review and updating of management and disposal techniques including the successful sale of property through the Alberta Real Estate Association members.

Primary highway development supported a continued need for right-of-way particularly in association with the Export Highway. Further progress was made in negotiations with First Nations on major highway routes. In keeping with government directions, plans were proposed for the complete privatization of legal survey contracts in the upcoming season.

## PROTECTION OF INVESTMENT IN THE INFRASTRUCTURE

Extensive monitoring of the condition of the paved roadway and bridge systems continued, in order to provide the data needed to plan, design, rehabilitate, reconstruct and operate these systems in the most cost-effective way possible. Through these monitoring programs, it is possible to optimize expenditures on Alberta's large paved roadway and bridge systems, so that users obtain the best possible overall service for the resources that are available.

Rehabilitation programs, involving overlays, recycling, seal coats, deck replacement and other forms of rehabilitation, were once again developed, designed and implemented for roadway pavements and bridges. Judicious use of seal coats provided cost-effective means of protecting deteriorating pavements and extending their lives.



Springtime monitoring of highway pavement strength enabled realistic load limits to be established, in order to prevent excessive and costly damage during this seasonally sensitive period of time.

The bridge deck rehabilitation program involved work on 36 structures on the primary and secondary highway and local road systems. Work continued on a program to replace or strengthen bridge structures on these same three roadway systems, to accommodate a log haul loading of 55 tonnes gross vehicle weight.

## CONSTRUCTION CONTRACTS

A total of 211 roadway and 22 bridge contracts were tendered during the period. This included 61 local road grading and 15 local road gravelling contracts, which is up significantly from last year and indicates the ongoing trend toward more contracting out of work formerly constructed by equipment rental, day labour forces. End Product Specifications (EPS) were used on 35 contracts.

Through increased municipal tendering of secondary highway construction and departmental use of EPS and other contracts involving contractor supply of materials, the amount of highway construction materials purchased directly by the department, such as asphalt, culverts, guardrail and fence materials, continued to decline. Asphalt was again purchased on a fixed bid unit price basis, and pricing again remained steady. Overall, roadway construction cost indices for 1992/93 were about the same as those of the previous year.

A total of 15 major bridges were completed during the period, including the \$30 million bridge over the Peace River northeast of the Town of Peace River, adjacent to the Daishowa Pulp Mill. Work continued on the \$9 million bridge over the Athabasca River northeast of Grassland, adjacent to the Alberta Pacific Pulp Mill.

The new Crowfoot Ferry was fabricated and launched during this period. Two cast-in-place concrete box girder separation structures were constructed on Highway 1 west of Calgary, using a contract that included a rental fee for each day that the work required travel lanes to be closed. The result was completion of the two structures in about half of the anticipated time.

Work was begun to standardize the specifications for maintenance type contracts that have typically been tendered in the regions; in order to ensure

consistent, quality contract tendering and administration of these contracts throughout the province.

Construction safety issues have received major attention. The department, in collaboration with the Alberta Construction Safety Association, Alberta Occupational Health and Safety and the Alberta Roadbuilders and Heavy Construction Industry, has committed to implement a two-phase Pre-Qualification Program for all contractors and sub-contractors who perform work on a department contract in excess of \$100 000.

## FLEET & MATERIALS

Equipment, Supply and Services provides fleet, material and shops' services to the department through the Transportation Revolving Fund on a cost recovery basis. Activities during 1992/93 included:

- environmental audits of all repair shop and inventory sites across the province to ensure that our environmental responsibilities are being met
- the introduction of a new policy for the use of retreaded tires on equipment and the expansion of the program to use re-refined oil throughout the fleet
- the development of formal materials requirements planning procedures with our customers to achieve better control with higher service levels
- studies and action plans on government wide fleet management integration, fleet fuel efficiency, bulk oil handling and disposal systems, and human resource planning
- the development and implementation of a business plan for the department's fuel sites and inventories that defined a transfer of the function to the private sector retail network
- the introduction of new inventory management procedures that include materials at maintenance sites across the province.

Staffing of the branch was further reduced by 11 per cent through attrition and voluntary severance. Inventories of materials were further reduced by over 14 per cent. Costs of operation of the Transportation Revolving Fund were fully recovered and levels of service performance for our customers were maintained.

## RESEARCH AND DEVELOPMENT

The department has a strong commitment to develop and implement technical solutions that enhance the efficiency and effectiveness of its construction, maintenance and other operations. A number of factors characterize the department's research program. Firstly, priorities are guided by five-year and annual plans, developed with input from a Research Advisory Committee which has representation from across the department. Opportunities for co-operative projects with other jurisdictions and agencies are actively sought to encourage technology transfer and elicit support for the department's research investment. Finally, information sharing and technology transfer across the department's decentralized organization are high priorities.

In 1992/93, the department continued its active participation in the Canadian and U.S. Strategic Highway Research Programs which are investigating asphalts, pavements, concrete structures and highway maintenance operations. For a modest investment, access is gained to the results and technologies from this almost \$200 million international co-operative research effort.

With both these programs nearing completion, the department actively participated in the formulation of a national five-year plan, to come into effect in April 1994. It will put the research findings into practice and realize the expected savings to the department of many millions of dollars in constructing and maintaining the highway infrastructure. Other co-operative research, which levered up the departmental research investment, was conducted with the Research and Development Council of the Transportation Association of Canada, the Alberta Research Council, the Forest Engineering Research Institute of Canada and the Universities of Alberta and Calgary.

Improvement to the operational and environmental aspects of the department were important research objectives during 1992/93. These included: low temperature properties of asphalts and performance of pavements, development of standard petrographic tests for Alberta aggregates, evaluation of de-icer alternatives to common salt, control of wildlife along highways, evaluation of recycled plastic fence posts and evaluation of compressed natural gas for use in our fleet vehicles.

Adaptation of new and evolving technologies continued to be a high priority. Implementation of satellite technologies for surveying applications was continued, as well as adaptation of this technology for

very accurate positioning of our second generation video-log van for collecting highway inventory. Automation of some aspects of truck haul were also investigated, to reduce project engineering costs and improve operational safety. In our second year of introduction of expert systems to the department, eight applications were developed by various departmental staff ranging from erosion control, to log haul route approval, to analysis of small culverts.

Technology transfer and implementation of research into practice continued to be priorities. The Transearch publication was continued throughout its fourth year and the third Technology Transfer seminar was held in Red Deer. This annual seminar is aimed specifically at transferring and sharing research and innovation with field staff. In order to make research and innovation information accessible to all departmental staff, a computerized system (INFOSPON) was developed and implemented, whereby all departmental staff can access information on current departmental research, field innovations, products tested, publications and contact persons.



# MUNICIPAL INFRASTRUCTURE

## CITY TRANSPORTATION

The Government of Alberta has been providing financial assistance to urban centres since 1931 to develop and operate effective and efficient roadway and public transit systems. Over the years, the grant programs have been evaluated and adjusted to respond to the challenging needs of Alberta cities and the fiscal capacity of the government.

The Alberta Cities Transportation Partnership, originally announced in 1988, is the program that provides financial assistance to the major urbanized centres in Alberta. In 1992/93, \$102 million was allocated to assist 16 cities and the Urban Services Area of Sherwood Park. In 1991, the government announced that the Alberta Cities Transportation Partnership would be an ongoing multi-year program, effective April 1992, to allow cities to plan long-term transportation construction projects and to reflect current economic conditions.

In 1992/93, grants totalling \$102 million were disbursed to each eligible municipality as follows:

Airdrie	393 413
Calgary	40 507 709
Camrose	649 418
Drumheller	313 344
Edmonton	36 435 727
Fort McMurray	1 879 056
Fort Saskatchewan	616 924
Grande Prairie	3 795 220
Leduc	623 614
Lethbridge	3 307 392
Lloydminster	500 526
Medicine Hat	2 452 332
Red Deer	3 221 303
Spruce Grove	596 807
St. Albert	2 294 048
Wetaskiwin	493 757
County of Strathcona (Sherwood Park)	1 835 332

---

**\$ 99 915 922**

Public Transit Operating Grants to Towns, Villages, Counties, M.D's, etc.	2 505 216
---	-----------

Multi-jurisdictional projects	70 090
----------------------------------	--------

---

**TOTAL GRANTS \$102 491 229**

---

The Alberta Cities Transportation Partnership is comprised of four grant components:

### Capital Grants

- Basic Capital
- Primary Highway Connectors

### Operating Grants

- Primary Highway Maintenance
- Public Transit Operating - distributed through the Alberta Partnership Transfer Program

Figure 1 illustrates the overall distribution of total grant disbursements in 1992/93.

ALBERTA CITIES TRANSPORTATION PARTNERSHIP  
DISTRIBUTION OF 1992/93 GRANT DISBURSEMENTS

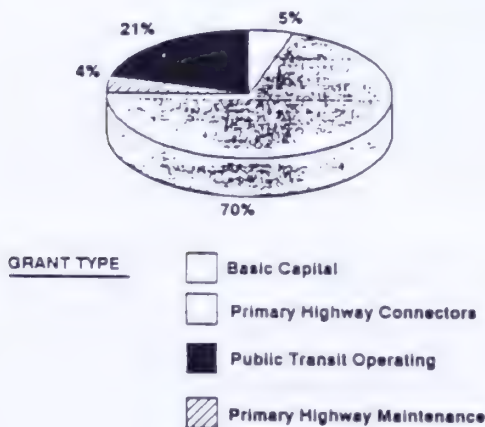


FIGURE 1

## 1992/93 MAJOR PROJECTS/EVENTS

### CALGARY

- Opening of the Glenmore Trail extension (Highway 8) from Sarcee Trail to 69 Street S.W.
- Continuing construction of the Interchange at John Laurie Boulevard/14 Street N.W.
- Continuing construction of Beddington Trail/Country Hills Boulevard from Deerfoot Trail to 14 Street N.W.
- Purchase of 51 new transit buses with easier access features.
- Extensive overhaul of the city's Light Rail Vehicles.

### EDMONTON

- Opening of the South LRT extension to the University Station.
- Completion of the upgrading of 114 Street from University Avenue to Belgravia Road.
- Construction is continuing on major projects:
  - Whitemud Drive/Calgary Trail Interchanges.
  - Capilano Drive extension including an Interchange at Yellowhead Trail.
- Commitment to purchase 59 low-floor, fully-accessible transit buses.

### RED DEER

- Official opening of the Major Continuous Corridor and Railway Relocation Project.
- Construction of the Ross Street/49 Street one-way couplet to provide more efficient traffic flow into the downtown.

### FORT SASKATCHEWAN

- Rehabilitation of Highway 15/21, Phase II.

### MEDICINE HAT

- Rehabilitation of Trans Canada Highway from the South Saskatchewan River to the west city limits.
- Construction of Dunmore Road and 22 Street intersection improvements.

### WETASKIWIN

- Reconstruction of 47 Street (SH 814) from Highway 13 to the north city limits.

## RURAL TRANSPORTATION

### Streets Improvement Program

Implemented in 1989, the Streets Improvement Program provides formula-based, cost-shared funding to Alberta towns, villages and summer villages for the construction of lasting street improvements. This program enhances the quality of life in smaller urban centres; creates employment in the construction industry; and enables municipalities to attract industry and new development.

Projects such as grading, gravelling, base course paving, sidewalks, curb and gutter, roadway drainage and related works were funded during the fiscal year. During 1992/93 approximately \$7 million was



The Community Safe Streets Program, a component of the Streets Improvement Program, was also implemented in 1989 to provide additional funding for towns, villages and summer villages to construct roadway facilities. Projects such as traffic control devices, improved street illumination, wheelchair ramps and sidewalk improvements, as well as pedestrian crosswalks were funded under the program. During the 1992/93 fiscal year, \$316 525 was provided for 49 municipalities to undertake 49 projects.

## Road Grants to Municipal Districts, Counties and Special Areas

During 1992/93 a comprehensive review of the program was undertaken. The review included a look at the program history, objectives, program administration, eligibility criteria, and the applicability of the funding formula. The review indicated that the funding provided to the

Grant dollars provided under various program components are detailed below:

**\$29 006 346**

## Alberta Municipal Water/Wastewater Partnership

When the program was announced in 1991/92, several initiatives were developed and implemented. The water conservation initiative encourages water conservation by implementing the potential for a 10 per cent reduction in the cost-sharing ratio for those municipalities that do not have metering in place and the average annual consumption exceeds the norm for



the area. In addition, those municipalities which have metering in place but have not implemented a consumption based rate structure are eligible for the 10 per cent lesser grant. In order to assist the municipalities in implementing an effective water conservation program and to provide them with options for water conservation, two Water Conservation Workshops were held (one in Edmonton and another in Calgary), during 1992/93. The workshops were very successful in that many municipalities have moved towards either implementing a water conservation program or providing for one in their long-term plan. To date, the department has not had to implement the 10 per cent reduction in grant funding for any municipality.

The regional utilities initiative is available to regional commissions or two or more municipalities for the construction of regional water and wastewater systems which are more cost-effective and environmentally desirable than independent facilities. During this fiscal year, several regional projects were proposed and implemented, including the Thorhild Regional Water Supply System. This project provides a safe and adequate source of water to two communities in the Thorhild region.

The water/wastewater studies initiative provides cost-shared funding to eligible communities (under 10 000 population) for preliminary engineering studies to investigate the water and wastewater needs of their community. This initiative encourages municipalities to plan for future expenditures and provides the department with information on future municipal needs. During 1992/93, several studies were funded.

During 1992/93, approximately \$22 million was provided to 155 municipalities to undertake 205 projects under the program.

## **MOTOR TRANSPORT SERVICES**

## **PROTECTION OF HIGHWAY INFRASTRUCTURE**

Programs directed to the protection of the current investment in the province's highway and bridge infrastructure continued with increased consultation from the trucking industry.

Efforts continued to complete the next phase of the Transportation Association of Canada (TAC) weight and dimension standards for Alberta and to expand the high-load transport corridor in the Drayton Valley area. During this same year, Highway 39 between the junction of Highway 22 and SH 621 was added to this corridor.

For the benefit of farmers and motor carriers, four new mobile inspection sites (MIS) were constructed at strategic locations throughout the province bringing the total to 14. MIS sites are located at Castor, Cheadle, Claresholm, Cochrane, DeWinton, Hanna, High Level, Hoselaw, Red Earth, Rocky Mountain House, Rycroft, Two Hills, Wainwright and Westlock.

Mobile vehicle inspection stations were added for a total of four now operating out of Calgary, Red Deer, Edmonton and Grande Prairie. These mobile stations are used to travel to remote areas to weigh vehicles and conduct safety checks.

The agreement between Montana and Alberta, in place since 1990/91, continues to allow commercial vehicles to haul Alberta weights from the border to Shelby, Montana on Interstate Highway 15. The mutual co-operation between the two authorities has provided significant benefits to the industries involved.

New truck courses were offered to industry at Keyano and Grande Prairie Colleges in an ongoing and successful program to meet with and educate industry on truck safety items such as air brake systems and lighting.

## **CARRIER SERVICES AND PARTNERSHIPS**

Under the National Safety Code (NSC) Program, 8409 Alberta-based carriers responded to the invitation to enter into the program. The total number of carriers that are included in the NSC Program in Alberta now exceeds 20 000.



There were 2074 new applications for operating authority in Alberta and 2309 were renewed. Amendments to the federal Motor Vehicle Transport Act facilitated changes to the operating authority application process through simplification and a reduction in the documentation requirements needed to support an application.

A total of 122 250 permits were issued to regulate the movement of oversized loads on Alberta highways. Revenue generated from permit sales and user fees was approximately \$7 million. To provide the industry with a convenient method to pay their invoices, payments can now be made at a local bank.

Staff continue to work internally and externally with the motor carrier industry and other jurisdictions on the implementation and standard application of all NSC standards and operating authority requirements.

Alberta Transportation and Utilities' commitment to barrier-free transportation in Alberta continued and an accessible inter-city bus service for persons with disabilities commenced operation on a run between Edmonton, Red Deer and Calgary, as a one-year demonstration project.

Progress was made in discussions between Alberta and other Western Canadian jurisdictions and the Western States in an effort to streamline and standardize regulations on the movement of vehicles and loads from a weight and dimension perspective.

College courses have been developed and offered to students enrolled in criminal justice at both Lethbridge Community College and Grant MacEwan in Edmonton. These courses are designed to provide insight into the requirements of prospective Motor Transport Services (MTS) field officers. Additionally, Grant MacEwan students participate in a "ride-along" program in Edmonton, which was implemented in this period.

Education and training programs were once again delivered to local governments and members of the commercial transport industry. Seminars explaining standards and regulations for equipment use in Alberta were held for trucking industry representatives and equipment manufacturers.

Once again, through joint efforts with other enforcement agencies, training seminars were provided to peace officers in county and municipal district jurisdictions, on safety and highway protection regulations.

## **SAFETY**

### **Collision Reduction**

The final stage of revisions to the Alberta Collision Information System (ACIS) was implemented to provide individuals with improved information regarding collision locations, highway quality and identification of problem vehicles, drivers and locations.

Total traffic fatalities in 1992 was 368, the lowest level in Alberta since 1966.

Alberta's commitment to a national initiative to facilitate the safe movement of goods and people resulted in policies, procedures and safety related regulations being amended in consultation with the province's commercial trucking and school bus industries to improve safety within their operations.

### **Safety Standards and Records**

With the Commercial Vehicle Inspection Program (CVIP) now in place for more than one year, there were 1732 privately licensed inspection stations utilizing 3745 licensed mechanics by the end of the 1992/93 year. A total of 68 074 inspection certificates were processed under this program. Total license revenues from station and mechanic licenses was \$261 000.

Four Commercial Vehicle Safety Alliance (CVSA) inspection buildings are now in use at Coutts, Balzac, Leduc and Slave Lake.

The Written-Off Vehicle Inspection Program, designed to prevent poorly repaired vehicles from being sold or driven subsequent to being written off after major collision damage, was continued. Approximately 2816 inspections were completed under this program, which is delivered through 179 privately licensed inspection stations and 715 licensed mechanics.

The 1992/93 year saw this department providing a grant for upgrading propane installations on school buses running on propane fuel to meet new provincial standards. By program's end, 207 buses were converted under this program.

### **Railway Safety**

A safety program has been developed with the intent to monitor performance and maintenance of safe plant sites for railways under provincial jurisdiction. This



jurisdiction extends only to those railways that operate solely within the province. To date, this includes only the Central Western Railway Corporation which operates a short-line railway and Alberta Prairie Steam Tours which uses Central Western Railway trackage from May to October each year.

The safety program included spot inspection and audit of tracks, right-of-way, bridges, signals, locomotives, rolling stock and operations to establish compliance with standards and legislation. Safety deficiencies and concerns were identified, recommendations were made, interim measures were ordered and compliance was monitored on a regular basis.

Work continues on the development of legislation that will serve the provincially-supervised railway industry in the future.

## SAFETY EDUCATION

The move towards direct delivery of public safety education by schools and community-based organizations was completed and this year marked the first year of use for these new programs under the self delivery format. While somewhat slow in accepting this new format initially, clients are now using these programs at an accelerating rate. Community leaders and teachers received self-contained education packages on topics which include bicycle safety, winter driving, seat belts and school bus safety with versions for riders, drivers and emergency evacuations. School bus safety to be the most popular education program accounting for 67 per cent of all program requests.

Total Audiences Reached - 1992/93  
Total 36 732 Albertans



Working with the Alberta Coalition on Child Passenger Restraint, an in-service training program on child seat use is in the development stage. This program will provide detailed information on the correct installation and use of child car safety seats to public health nurses, hospital staff, social service workers and police officers. While only just introduced, this program has a long waiting list of requests for next year.

Providing an interactive learning environment on pedestrian safety for kindergarten (Early Childhood Services (ECS)) and grade one students, the extremely popular Mobile Safety City continues to be offered to schools across the province. The popularity and success of our Mobile Safety City has spurred interest in establishing similar training programs in communities such as Lethbridge, Red Deer and Fort McMurray. During the 1992/93 year, the Mobile Safety City reached just over 9000 students.

## ALBERTA MOTOR TRANSPORT BOARD

The Board continues to advance a program of regulatory reform for both the intra and extra provincial motor carrier industry operating in Alberta. This program is intended to decrease economic controls while concentrating on the delivery of safety standards affecting the operation of commercial vehicles on Alberta highways.

Alberta supported the sunseting on January 1, 1993 of the economic regulation sections of the federal Motor Vehicle Transport Act, 1987, leaving fitness and safety as the only entry control criteria for commercial carriers applying to provide a for hire truck transportation service.

This regulatory reform process has resulted in a number of changes in the trucking industry. Mergers and acquisitions combined with shifting traffic patterns have resulted in most sectors of the Alberta extra provincial trucking industry becoming more dominant in the north/south corridors. Alberta truckers remain very competitive and are positioning themselves to respond to the freight volumes that may be generated if the Canada/U.S./Mexico Free Trade Agreement (NAFTA) is resolved.

The Secretariat responded to a number of concerns on issues from both carriers and users of motor carrier services relating to conditions of carriage, legislative requirements and operating practices and procedures.

The scheduled bus industry continues to report a serious decline in ridership throughout rural Alberta. The Board is working closely with the industry in an effort to assist them in maintaining the level of scheduled bus service which is an essential service to many rural Alberta communities.

The Board continues to develop legislation that will serve the trucking industry by emphasizing ease of entry for carriers and by changing the Board's role which will increase emphasis on operating safety.

## RURAL UTILITIES

## RURAL GAS

This program provides rural Albertans with financial assistance to obtain natural gas service through a network of rural gas distributors and is unique to Alberta. This service ensures that natural gas is available to consumers at a reasonable cost.

Since its inception in 1973, over 143 637 natural gas service points were installed through an infrastructure of gas distribution pipelines totalling 101 640 kilometres in length. This total includes the 4825 service installations and 2640 kilometres of pipeline installed in 1992/93. The pipeline network is the largest of its kind in the world and reaches most agricultural areas of the province.

Grants totalling \$390 million, or approximately 57 per cent of the program capital cost of \$682 million, have been provided to rural gas distributors since 1973. This includes approximately \$8 million in grant payments during the past year. The program contributes to Alberta's rural economy through annual fuel cost-savings of approximately \$160 million to rural residents and rural-based industry. In addition, the private sector and municipal utilities which operate under the program contribute the following capital and operating expenditures each year to the rural economy:

---

• Overall capital and operating expenditures	\$115 million
• Direct employment	900 person-years
• Total salaries for direct employment	\$26.2 million

---

Gas Alberta serves as the gas supply broker for most of Alberta's small rural gas utilities. The program manages a natural gas supply pool of more than 18 billion cubic feet each year, and uses the economies of scale from this pool to provide rural gas utilities with secure and reliable gas supplies at a reasonable price. In 1992, Gas Alberta reduced the price for gas supplies by a further \$0.15 per gigajoule, the sixth year in a row that prices have been reduced as a result of gas industry deregulation.



## GRANTS TO INDIVIDUALS

### Alberta Farm Water Grant Program

During the 1992/93 fiscal year the Alberta Farm Water Grant Program assisted farmers and ranchers with water systems for domestic and/or livestock use. No new applications were accepted as the program covered only funding for applications received prior to July 27, 1990.

A total of approximately \$2 million in grants was paid out during the year.

### Remote Area Heating Allowance

The Remote Area Heating Allowance Program reduces the cost of propane and heating oil for those Albertans unable to obtain natural gas. These people are mostly located outside the boundaries of a natural gas distributor. Total rebates paid during the 1992/93 fiscal year were \$248 000.

## RURAL ELECTRIFICATION PROGRAM

The Rural Electrification Revolving Fund has provided financing for new electrical service for Alberta's farmers for 40 years. The fund's lending activities were extended in 1987 to assist rural electrification associations with the rebuilding of their distribution systems.

Approximately \$192 million in loans have been issued for new farm services through the lifetime of this program. During the 1992/93 fiscal period a total of \$4 million in loans and grants were issued.

The following list highlights the program activity for this fiscal period:

- 597 loans were processed totalling \$1 759 660 for new electrical services
- 151 loans totalling \$1 289 050 were issued to rural electrification associations to rebuild and improve their distribution systems
- repayments on outstanding loans during the year totalled \$4 342 087
- at year end, the outstanding loans receivable balance of the Rural Electrification Revolving Fund was \$20 072 646 net of loan discounts and bad debt allowances.

## GRANT ACTIVITIES

A recoverable grant program in support of rural electrification was introduced in April of 1990. Some \$542 423 was advanced during the 1992/93 fiscal period to reduce the cost of expensive electrical services. The repayment of these grants is contingent upon lower cost additional services connecting to the existing distribution system(s).

Grants totalling \$30 000 were issued to the Alberta Federation of Rural Electrification Associations of which \$28 000 went towards the cost of publishing the history of rural electrification in Alberta. Some \$2000 in grants were issued in support of newly amalgamated REAs to consolidate their financial statements.

In addition, grants of \$144 000 and \$22 000 were issued under the Isolated Communities and Generating Plant Grant Programs respectively.

# **ADMINISTRATIVE SERVICES**

Administrative Services supports the department by providing financial management support and services; developing, supporting and maintaining computer systems; personnel management support and services; facilities management; office supplies and duplicating services. These functions are organized in four branches:

- Financial Services
- Personnel Services
- Information Systems
- General Services

## **ASSISTING OUR PARTNERS**

### **Improving: Safety in Road Construction**

- In 1990, a number of fatal accidents occurred in the road construction industry. Since a significant portion of roadbuilding activity is the direct result of Transportation and Utilities' programs or financial assistance to other levels of government, the department worked with its partners; the Alberta Roadbuilders and Heavy Construction Association, Alberta Construction Safety Association, and Occupational Health and Safety to improve the safety of workers in the road construction industry.
- A resulting development was the provision of the Pre-qualification Program which is now being used as a prototype by the private sector. In recognition of the department's leadership role in this project, the "Partners Award" was presented to the department by the Alberta Construction Safety Association. Guidelines for contracting the private sector were developed and utilized to enhance the safety of workers in the road construction industry.

### **Payments to Contractors**

- The Alberta Roadbuilders Association and individual contractors registered their complaints about the length of time it took to receive final payment for many department roadway construction projects following contract completion. In March 1992, a Task Force comprised of representatives from key workgroups involved in the contractor payment process was commissioned to determine ways to improve this process. The project was undertaken with the assistance of a consultant facilitator familiar with total quality management principles and processes.



- Three current practices were identified that required improvement: completion of final details; producing one payment request rather than several small requests; and the practice of holdbacks or provision of an Irrevocable Letter of Credit. Improvements made to date include:

- The procedures for completion of final contract details were streamlined resulting in a reduction of the time required to make final payment to our contractors by 48 days.
- Payment processes were revised to provide for a monthly summary of all the progress estimates within one contract. In the past each estimate was dealt with separately.

The success of this project has served as a catalyst in the use of continuous process improvement practices involving all users from the outset.

## OUR PEOPLE

Over the year in excess of 170 Early Voluntary Severance contracts were executed and processed. This exodus of employees required support in manpower planning across the department. Restructuring within Regional Transportation required our consultation and assistance. The transition process involved staff reassignment to high need areas, and outplacement support initiatives through the use of voluntary severance.

A training and development needs assessment was conducted to determine where support might be required due to the changing times. As a result, the relevancy of programming to existing needs was evidenced by the development of 17 new courses and two new Operations Training Modules. Many of the new programs focused on enhancing the knowledge of the tools and techniques of total quality management. Department employees availed themselves of over 6400 training/development opportunities. More than 4500 of these were conducted in-house using a combination of private sector and staff resources.

## OUR SYSTEMS

In support of the decentralization and reorganization of the departmental operations as outlined earlier in this report, the department's financial reporting and controls system required modifications to sustain the additional delegation of financial administration functions to regions, districts and branch offices.

These modifications were in the planning stages this fiscal year with development and implementation scheduled for the 1993/94 fiscal year. Similarly, significant changes to computer systems utilized in managing and paying our staff are being planned.

The Automated Land Information System (ALIS) was moved into production this fiscal year. This electronic data management system was designed to automate various property management administrative operations and establish a single system land inventory.

The decision by the department to tender truck haul and private equipment rental services enabled the department to discontinue the use of a large computer based system. It was replaced by a small, less costly micro-computer based system which addresses the needs of those acquiring day labour services.

Today's business operations demand fast and efficient communication tools. To accommodate this need, an electronic mail system was put into operation to speed communications within the department and to reduce paper costs. In conjunction with this, Local Area Network (LAN) operations were expanded, integrated and upgraded to provide services to 800 users on 32 LANS.

## INTERNAL AUDIT

Internal Audit Services (IAS) provides managers with an assessment of the adequacy of internal control, including an evaluation of the effectiveness, and the efficiency, of operations.

In 1992/93, 28 audits were undertaken, including four special reviews at the request of the management of three divisions. Eight physical inventory counts were reviewed in various locations throughout the province. Audits were also undertaken governing the use of government vehicles in various locations, including the Twin Atria. Engineering audits were conducted in Hanna (Drumheller), Lac La Biche (Fort McMurray), Athabasca (Al-Pac) and Edson. The Edson audit focused on maintenance activities, while the others were construction audits.

In addition to new work initiated, IAS also completed our follow-up review on property management in the department. Our follow-up review indicated that subsequent to our original audits significant improvements had taken place in how we manage our properties. Continued improvement was still required in how we inventory our properties.

One investigation alleging contract improprieties was conducted. Our investigation revealed that there were no such improprieties. As a result of our review we did recommend changes to the contracting rules, and that contracting decisions be adequately documented.



# **APPENDICES**

## **ORGANIZATIONAL ROLES IN ALBERTA TRANSPORTATION AND UTILITIES**

Responsibilities are noted under each agency, division and branch.

### **MOTOR TRANSPORT BOARD**

- regulates motor carriers which includes the intra and extra provincial truck and bus industry; within the framework of the Alberta Motor Transport Act, and as delegated to the Board by the Federal Motor Vehicle Transport Act, 1987.

### **ALBERTA RESOURCES RAILWAY**

- accountable for revenues generated from railway usage
- annually assesses required railway maintenance.

### **INTERNAL AUDIT SERVICES**

- provides the department with a means of assessing the effectiveness and efficiency of its operations.

### **LEGAL SERVICES**

- provides legal services to the department through seconded Justice Department employees.

### **PUBLIC COMMUNICATIONS**

- provides public relations counsel and communications services supporting departmental policies, programs and activities.

### **PLANNING AND DEVELOPMENT**

- provides advice and recommendations to the department and government on policies affecting all modes of transportation, programs and plans for improvements to the transportation system.

#### **POLICY DEVELOPMENT**

- provides direction for strategic planning for the department
- develops and evaluates transportation policies, programs and legislation affecting all modes of transportation.

## **PLANNING**

- develops traffic statistics and forecasts and identifies requirements for improvements to the highway system
- translates requirements into long-range province-wide plans and location-specific functional plans
- manages roadside development and access to the highway system.

## **ADMINISTRATION**

- provides administrative support services necessary for the delivery of departmental programs.

### **FINANCIAL SERVICES**

- provides financial planning co-ordination and a controllership function aimed to ensure efficient and effective financial policies, procedures and controls.

### **GENERAL SERVICES**

- provides a variety of essential services, including accommodation and facilities planning, records management, library, insurance and office support.

### **INFORMATION SYSTEMS**

- provides computer technology expertise and support aimed to enhance the productivity of those involved in the delivery of department programs.

### **PERSONNEL MANAGEMENT**

- provides expert personnel management services aimed to enhance the effectiveness of the human resources of the department.

## **REGIONAL TRANSPORTATION**

- through a decentralized framework of five transportation regions and 15 districts, is responsible for the delivery of the department's capital construction (roadway, bridge and airport) and maintenance programs.

### **REGIONS AND DISTRICTS**

- provides roadside management and field

implementation for the delivery of construction and maintenance of the provincial transportation system (includes primary highways, improvement district roads, ferries, airports and rest areas).

- provides front line service to Albertans at the local level.

## **PROGRAM DEVELOPMENT**

- responsible for the development of capital construction and rehabilitation programs
- maintains inventories of road systems.

## **PROGRAM MANAGEMENT**

- responsible for scheduling and fiscal control of capital construction and rehabilitation programs
- monitors current year programs, project schedules, and costs.

## **TRAFFIC OPERATIONS**

- establishes traffic engineering and maintenance standards and procedures to ensure the provincial transportation system operates in a safe and efficient manner
- responsible for provincial airport, ferry and rest area operations.

## **ENGINEERING**

- provides engineering, contract administration and research standards and services in support of departmental construction, maintenance and other programs, and delivery of the department's major bridge construction programs.

### **BRIDGE ENGINEERING**

- provides engineering for and delivery of the department's major capital and maintenance bridge programs, and engineering support for regional bridge activities.

### **CONTRACTS ENGINEERING**

- provides contract administration and environmental co-ordination standards and services for the department's construction, maintenance and other programs.



## **DESIGN ENGINEERING**

- provides and co-ordinates geometric and earthwork design, survey, right-of-way, plans, utilities, engineering systems, and related training and materials acquisition standards and services for the department's construction and other programs.

## **MATERIALS ENGINEERING**

- provides materials, pavements and geotechnical engineering, design and technical services and standards for the department's construction, maintenance and other programs.

## **RESEARCH AND DEVELOPMENT**

- plans and manages applied research and technology transfer programs to support the department's construction, maintenance and other operations.

## **MOTOR TRANSPORT SERVICES**

- Ensures a safe and effective surface transportation user environment based on the optimum use of transportation resources while minimizing abuse of the transportation network. Develops and implements standardized legislation, regulations, and operating practices on the international, national and provincial level leading to uniform and safe standards for the movement of people and goods.

## **MOTOR CARRIER SERVICES**

- provides administrative, communications and training, and operational support services within the division.
- provides for permit issuance and division finance and revenue collection.
- provides secretariat services for Motor Transport Board operations.
- ensures public vehicle compliance with applicable Provincial/Federal Statutes and Regulations.
- integrates Alberta's co-operative efforts to develop a uniform program of enforcement that is firm yet fair across North America.

- provides joint vehicle compliance services with Montana in support of the North American Free Trade Agreement and as a model for inter-jurisdictional co-operative enforcement services between Canadian provinces.
- provides planning, research, business analysis and policy development to the division.

## **SAFETY AND NATIONAL SAFETY CODE (NSC)**

- provides direction and leadership to ensure the safe transportation of people and goods on Alberta's highways.
- administers Alberta's Railway Legislation as it pertains to safety and operating practices on non-federally chartered railways.
- takes positive, pro-active steps to reduce motor vehicle collisions and their accompanying injuries and fatalities.
- administers the NSC and integrates Alberta's programs into national and international heavy truck safety efforts.
- operates the Alberta Collision Information System (ACIS).
- provides one stop shopping for a wide variety of statistics and other information related to the motor transport industry.

## **MOTOR TRANSPORT ENGINEERING**

- develops weight and dimension regulations, policies and procedures which balance highway user needs with the physical capabilities of the road to provide a high standard of highway safety.
- integrates Alberta's weight and dimension standards with international and national bodies to develop effective and uniform regulations and codes of practice for North America.
- provides consultative advice to industry on evaluation of equipment and standards.
- provides additional seasonal protection for highways by using a system of winter weights, road bans and permits.

## **SUPPORT PROGRAMS**

- provides financial assistance programs and related technical, advisory and regulatory services to urban and rural municipalities and individuals.

## **EQUIPMENT SUPPLY AND SERVICES**

- provides fleet, materials and shop services, supporting the department's operations.

## **GAS UTILITIES**

- manages, co-ordinates and administers all aspects of the department's involvement in the rural gas utility industry.

## **MUNICIPAL SERVICES**

- delivers a variety of financial, technical and advisory services to cities, towns, villages, summer villages, municipal districts, counties and special areas with respect to transportation and utilities infrastructure.
- administers utilities officers assistance to rural municipalities.

## **PROPERTY SERVICES**

- provides policy development and standards for land acquisition and management and monitors the property administration process.

## **URBAN TRANSPORTATION**

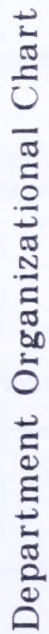
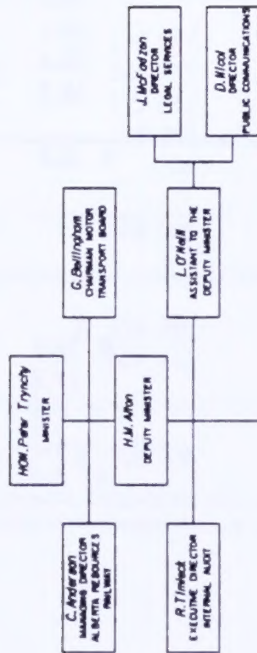
- provides financial, technical and advisory services to the province's 17 urban centres respecting transportation projects.
- liaises with city council and administrations ensuring the program meets cities' road priorities and that projects utilizing program funds are consistent with the department's overall transportation system.

## **UTILITY SERVICES**

- administers the department's grant, rebate and loan programs to individual

Albertans in support of rural electrification, farm water systems and reducing heating fuel costs.





**ALBERTA TRANSPORTATION AND UTILITIES  
REVOLVING FUND OPERATIONS  
YEAR ENDED MARCH 31, 1993**

	1993	1992
	(\$'000 000)	(\$'000 000)
<b>Transportation Revolving Fund:</b>		
Total Assets	\$ 85.7	\$ 89.1
Current Liabilities	6.4	4.1
Advances from the Province of Alberta (maximum \$200 million)	78.6	85.0
Surplus (deficit)	0.7	0.0
Revenue	49.4	62.4
Expenses	48.7	61.7
Net Income (Loss) for the year	\$ 0.7	\$ 0.7
<b>Rural Electrification Fund:</b>		
Total Assets	\$ 21.8	\$ 21.8
Advances from the Province of Alberta (maximum \$75 million)	21.3	21.3
Interest payable to GRF	0.5	0.5
Loan repayments	4.3	4.2
Loan advanced	\$ 3.6	\$ 4.2
<b>Gas Alberta Operating Fund:</b>		
Total Assets	\$ 9.9	\$ 8.4
Current Liabilities	4.4	2.3
Advances from the Province of Alberta (maximum \$12 million)	6.5	3.7
Surplus	(1.0)	2.4
Revenue	25.4	24.9
Expenses	28.7	24.0
Net Income (Loss) for the year	\$ (3.3)	\$ 0.9



**ALBERTA TRANSPORTATION AND UTILITIES  
GENERAL REVENUE FUND  
YEAR ENDED MARCH 31, 1993**

**BUDGET ESTIMATES, SPECIAL WARRANTS, TRANSFERS AND EXPENDITURES  
(CLASSIFIED BY CONTROL GROUP)**

	<b>Budget Estimates</b>	<b>Prior Year Liability</b>	<b>Special Warrants</b>	<b>Transfers</b>	<b>Total Authorization</b>	<b>Actual Expenditures</b>
	<b>(\$'000)</b>	<b>(\$'000)</b>	<b>(\$'000)</b>	<b>(\$'000)</b>	<b>(\$'000)</b>	<b>(\$'000)</b>
Manpower	\$ 136 667				\$ 136 667	\$ 128 169
Supplies and Services	385 953				385 953	391 128
Grants	175 681				175 681	172 820
Fixed Assets	9 636				9 636	5 124
Other	68				68	47
	<b>\$ 708 005</b>				<b>\$ 708 005</b>	<b>\$ 697 288</b>
Operating	\$ 178 692			\$ 1 740	\$ 180 432	\$ 175 701
Capital	529 313			(1 740)	527 573	521 587
	<b>\$ 708 005</b>			<b>\$ 0</b>	<b>\$ 708 005</b>	<b>\$ 697 288</b>

**REVENUE  
(CLASSIFIED BY SOURCE)**

	<b>1993</b>	<b>1992</b>
	<b>(\$'000)</b>	<b>(\$'000)</b>
Payments from the Government of Canada	\$ 939	\$ 2 937
Fees, Permits and Licenses	7 969	7 482
Refunds of Expenditure	2 396	1 408
Cost sharing agreements	(247)	3 722
Sales of assets and other revenues	1 718	936
<b>Total Revenue</b>	<b>\$ 12 775</b>	<b>\$ 16 485</b>



3 3286 51209 1162